

Amendments to the Claims:

The listing of the claims will replace all prior versions and listings of claims in the application:

1. (currently amended) A transfer plant for loading and unloading containers from container ships at seaports, comprising:

a vertical support which is propped up at the land side and a horizontal extension arm braced by said vertical support, wherein said horizontal extension arm protrudes across the ship that is to be unloaded on the sea side; and

a horizontal conveying device adapted to travel in a lengthwise direction along said extension arm;

land-side and sea-side hoisting and lowering devices adapted to pick up and put down the containers and adapted to cooperate with said conveying device, wherein said hoisting and lowering devices are arranged at the land and sea side and also on the horizontal extension arm;

intermediate storage devices that are arranged on said horizontal extension arm in the region of at least one chosen from said land-side and said sea-side hoisting and lowering devices, wherein the containers can be put down or picked up by the land-side or sea-side hoisting and lowering devices, as well as by said horizontal conveying device;

wherein said intermediate storage devices each comprise a downwardly extending support column and a horizontal swivel arm attached at a lower end of said support column and a carrying frame hinged at an end of said swivel arm away from said support column, wherein said carrying frame can swivel both into the region underneath said sea-side or land-side hoisting and lowering device and into the region of said two horizontal conveying devices into corresponding pick-up and hand-off positions for the picking up or handing off of a container; and

wherein said conveying device comprises at least two horizontal conveying devices arranged generally ~~parallel to each other~~ side-by-side on said horizontal extension arm in relation to a lengthwise direction of said horizontal extension arm, wherein said at least two

horizontal conveying devices are adapted to travel independently of each other and alongside each other between the land-side and sea-side hoisting and lowering devices in [[a]]said lengthwise direction along said horizontal extension arm, wherein containers on each of said at least two horizontal conveying devices are conveyed generally parallel to one another side-by-side in said lengthwise direction of said horizontal extension arm.

2. (cancelled)

3. (currently amended) The transfer plant per claim [[2]]1, wherein said horizontal extension arm comprises a rigid base arm at the sea side, a swivel arm joined to it at the sea side, and a rigid extension arm protruding at the land side; said rigid sea-side base arm and said rigid land-side arm being fastened to said vertical support, wherein said rigid sea-side base arm accommodates said sea-side hoisting and lowering device in a position of rest of the transfer plant, in which said sea-side swivel arm is swiveled upward.

4. (previously presented) The transfer plant per claim 3 including a railway carried by the sea-side portion of said horizontal extension arm, wherein said railway is for movement of a trolley of the sea-side hoisting and lowering device, wherein said land-side hoisting and lowering device is fastened at the land-side portion of said horizontal extension arm, said transfer plant further including other railways for the horizontal conveying devices arranged on both sides next to said railway of the sea-side hoisting and lowering device and next to the land-side hoisting and lowering device essentially along the entire horizontal extension arm.

5. (previously presented) The transfer plant per claim 4, wherein said vertical support is fashioned in the shape of a tower, wherein said railway for the hoisting and lowering device ends in the region of said vertical support, and said other railways for said horizontal conveying devices run laterally past the vertical support.

6. (previously presented) The transfer plant per claim 5, wherein said intermediate storage devices each comprise a downwardly extending support column and a horizontal swivel arm

attached at a lower end of said support column and a carrying frame hinged at an end of said swivel arm away from said support column, wherein said carrying frame can swivel both into the region underneath said sea-side or land-side hoisting and lowering device and into the region of said two horizontal conveying devices into corresponding pick-up and hand-off positions for the picking up or handing off of a container.

7. (previously presented) The transfer plant per claim 6, wherein said sea-side swivel arm and said sea-side carrying frame can each swivel at least $\pm 90^\circ$ about vertical axis, independently of each other.

8. (previously presented) The transfer plant per claim 7 including a parallelogram type coupler mechanism, wherein said swivel mechanism of at least one chosen from said land-side carrying arm and said land-side carrying frame can be driven by said parallelogram type coupler mechanism, so that the orientation of the container remains unchanged during the swivel motion.

9. (previously presented) The transfer plant per claim 8, wherein said carrying frame for the container can be swiveled into a central swivel position between the two pick-up and hand-off positions in the region of said railways, where the container can be connected to or detached from said sea-side or land-side hoisting and lowering device.

10. (previously presented) The transfer plant per claim 9, wherein said horizontal conveying devices each comprise a frame with a rail traversing mechanism that can travel on said railways, a hoisting mechanism and a spreader to receive the container which has been swiveled and positioned underneath the spreader.

11. (previously presented) The transfer plant per claim 10, wherein said land-side hoisting and lowering device is configured as a lift guided on said vertical support, wherein said lift comprises a trolley, guided on a horizontal hoisting beam, with a load suspension means for

the container, wherein said hoisting beam is suspended from hoisting cables and linked by a cross rail to guide rollers that can roll against said vertical support.

12. (previously presented) The transfer plant per claim 11 including hoisting cables of said land-side hoisting and lowering device that are coupled to a mobile counterweight to at least partly compensate for the natural weight of said land-side hoisting and lowering device.

13. (previously presented) The transfer plant per claim 12 including a loading station that is arranged beneath said land-side hoisting and lowering device, said loading station having two pick-up and hand-off positions that can travel alternately underneath said hoisting and lowering device, cooperating with a horizontal conveying system.

14. (previously presented) The transfer plant per claim 13, wherein said transfer plant has a gantry type substructure, supported on said rail traversing mechanisms, wherein said extension arm protrudes across said substructure on the land side, and said vertical support is propped up centrally on said substructure at the land side.

15. (currently amended) A method of loading and unloading of containers from container ships with a vertical support which is propped up at the land side and on which a horizontal extension arm is braced, wherein said extension arm protrudes across the ship that is to be unloaded on the sea side and along which at least two horizontal conveying devices can travel, wherein said conveying device cooperates with hoisting and lowering devices that pick up and put down the containers, said hoisting and lowering devices being arranged at the land and sea side and also on said horizontal extension arm, wherein said at least two horizontal conveying devices are arranged generally ~~parallel to each other~~ side-by-side on the horizontal extension arm in relation to a lengthwise direction of said horizontal extension arm and can travel independently of each other between the land-side and sea-side hoisting and lowering devices in ~~[[a]]~~ said lengthwise direction along the horizontal extension arm, and with intermediate storage devices arranged on the horizontal extension arm in the region of at least one chosen from the land-side and the sea-side hoisting and lowering devices, where

containers can be put down or picked up by the land-side or sea-side hoisting and lowering devices, as well as the horizontal conveying devices, the method comprising:

- a) for the unloading of containers from a container ship tied up at the dock, providing a spreader and picking up a container by said spreader of the sea-side hoisting and lowering device, which has been positioned on the horizontal extension arm above the container, and raised to a maximum hoisting height,
- b) providing a horizontally swiveling carrying arm having a horizontally swiveling carrying frame at the intermediate storage device arranged on the sea-side hoisting and lowering device, said carrying arm and carrying frame swiveling from a position of rest underneath a railway of the two horizontal conveying devices into a position underneath the container,
- c) placing the container down on the carrying frame and swiveling the container along with said carrying frame under one of the two side-by-side railways of the horizontal conveying devices,
- d) positioning at least one of the horizontal conveying devices above the container on the carrying frame receiving the container and transporting the container to the end of the land-side extension arm, while the sea-side hoisting and lowering device picks up a new container,
- e) handing off the container at the land-side end of the extension arm to a carrying frame of a second intermediate storage device, having a downwardly extending support column and swiveling said carrying frame by a horizontal swivel arm into the region of the railways of the horizontal conveying devices underneath the container,
- f) after detaching the container from the horizontal conveying device, swiveling the carrying frame with the container under the hoisting mechanism of the hoisting and lowering device hinged to the land-side extension arm and picking up the container by a spreader,

g) swiveling the carrying frame back and lowering the container by the hoisting and lowering device and handing off the container to a horizontal conveying system on the ground,

h) concurrently with steps a through g, picking up a second container by the sea-side hoisting and lowering device and transporting the second container by a second of the at least two horizontal conveying devices across its other railway to the end of the extension arm at the land side, wherein the second horizontal conveying device is positioned generally parallelside-by-side relative to a first of the horizontal conveying devices, wherein the second container is conveyed generally parallelside-by-side relative to a container on the first conveying device along the lengthwise direction of the horizontal extension arm and is handled in the same fashion, and

i) performing the steps a through h in reverse sequence for loading containers on a ship.

16. (previously presented) The method per claim 15, wherein the container that is oriented transversely to the lengthwise axis of the extension arm when picked up by the first hoisting and lowering device is swiveled into a predetermined position parallel to the extension arm by one chosen from the carrying arm and the carrying frame swiveling through $\pm 90^\circ$.

17. (previously presented) The method per claim 16, wherein the container that is oriented parallel to the extension arm when placed on the carrying frame of the second land-side hoisting and lowering device remains unchanged in its orientation when swiveled into the region of the hoisting and lowering device as a result of opposite swivel movements of the carrying arm and carrying frame.

18. (previously presented) The method per claim 15, wherein the container that is oriented parallel to the extension arm when placed on the carrying frame of the second land-side hoisting and lowering device remains unchanged in its orientation when swiveled into the

region of the hoisting and lowering device as a result of opposite swivel movements of the carrying arm and carrying frame.

19. (previously presented) The transfer plant per claim 1, wherein said horizontal extension arm comprises a rigid base arm at the sea side, a swivel arm joined to it at the sea side, and a rigid extension arm protruding at the land side; said rigid sea-side base arm and said rigid land-side arm being fastened to said vertical support, wherein said rigid sea-side base arm accommodates said sea-side hoisting and lowering device in a position of rest of the transfer plant, in which said sea-side swivel arm is swiveled upward.

20. (previously presented) The transfer plant per claim 1 including a railway carried by the sea-side portion of said horizontal extension arm, wherein said railway is for movement of a trolley of the sea-side hoisting and lowering device, wherein said land-side hoisting and lowering device is fastened at the land-side portion of said horizontal extension arm, said transfer plant further including other railways for the horizontal conveying devices arranged on both sides next to said railway of the sea-side hoisting and lowering device and next to the land-side hoisting and lowering device essentially along the entire horizontal extension arm.

21. (previously presented) The transfer plant per claim 20, wherein said vertical support is fashioned in the shape of a tower, wherein said railway for the hoisting and lowering device ends in the region of said vertical support, and said other railways for said horizontal conveying devices run laterally past the vertical support.

22. (cancelled)

23. (currently amended) The transfer plant per claim ~~[[22]]~~1, wherein said sea-side swivel arm and said sea-side carrying frame can each swivel at least $\pm 90^\circ$ about vertical axis, independently of each other.

24. (previously presented) The transfer plant per claim 6 including a parallelogram type coupler mechanism, wherein said swivel mechanism of at least one chosen from said land-side carrying arm and said land-side carrying frame can be driven by said parallelogram type coupler mechanism, so that the orientation of the container remains unchanged during the swivel motion.

25. (previously presented) The transfer plant per claim 6, wherein said carrying frame for the container can be swiveled into a central swivel position between the two pick-up and hand-off positions in the region of said railways, where the container can be connected to or detached from said sea-side or land-side hoisting and lowering device.

26. (previously presented) The transfer plant per claim 1, wherein said horizontal conveying devices each comprise a frame with a rail traversing mechanism that can travel on said railways, a hoisting mechanism and a spreader to receive the container which has been swiveled and positioned underneath the spreader.

27. (previously presented) The transfer plant per claim 1, wherein said land-side hoisting and lowering device is configured as a lift guided on said vertical support, wherein said lift comprises a trolley, guided on a horizontal hoisting beam, with a load suspension means for the container, wherein said hoisting beam is suspended from hoisting cables and linked by a cross rail to guide rollers that can roll against said vertical support.

28. (previously presented) The transfer plant per claim 27 including hoisting cables of said land-side hoisting and lowering device that are coupled to a mobile counterweight to at least partly compensate for the natural weight of said land-side hoisting and lowering device.

29. (previously presented) The transfer plant per claim 1 including a loading station that is arranged beneath said land-side hoisting and lowering device, said loading station having two pick-up and hand-off positions that can travel alternately underneath said hoisting and lowering device, cooperating with a horizontal conveying system.

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30. (previously presented) The transfer plant per claim 1, wherein said transfer plant has a gantry type substructure, supported on said rail traversing mechanisms, wherein said extension arm protrudes across said substructure on the land side, and said vertical support is propped up centrally on said substructure at the land side.